TOOELE CHEMICAL AGENT DISPOSAL FACILITY (TOCDF)

COMPREHENSIVE PERFORMANCE TEST PLAN

FOR THE

DEACTIVATION FURNACE SYSTEM

APPENDIX B

AUTOMATIC WASTE FEED CUTOFF TABLES

Revision 0

December 3, 2008

Table D-1
DEACTIVATION FURNACE SYSTEM
RCRA AUTOMATIC WASTE FEED CUT-OFFS[1]

Item No.	Tag Number	Process Data Description	Set point[a,b]
1	16-XS-207	Jammed Chute Line A	Feed Chute Filled 10 second delay
2	16-XS-209	Jammed Chute Line B	Feed Chute Filled 10 second delay
3	PEP-1HR-DFS	Propellant, Explosives, and Pyrotechnics (PEP) Feed Greater Than	> 479 lb PEP/hr
4	16-SAHH-602	Kiln Speed (rpm) Greater Than or Equal to	≥ 2 RPM
5	16-SALL-602	Kiln Rotation Less Than or Equal to	≤ 0.33 RPM
6	16-PSHH-204	Kiln Combustion Chamber Pressure: Greater Than	> -0.1 in. w.c. (5-sec Delay)
7	16-TIT-182	Kiln Exhaust Gas Pre Quench Temperature Less Than or Equal to	≤ 954° F, one-hour rolling average
8	16-TAHH-008	Kiln Exhaust Gas Post Quench Temperature Greater Than	> 1,650° F
9	16-TALL-042	Lower Heated Discharge Conveyor Temperature Less Than or Equal to	≤ 1,000° F
10	16-TALL-184	Upper Heated Discharge Conveyor Temperature Less Than or Equal to	≤ 1,000° F
11	16-XS-058	Jam in Discharge Conveyor	Discharge Chute Filled 10 second delay
12	16-XS-821	Jam in Discharge Conveyor	Discharge Chute Filled 10 second delay
13	16-SSL-057	No Motion on Heated Discharge Conveyor	No Motion
14	16-TIT-092	Afterburner Temperature Less Than or Equal to	≤ 2150° F, one-hour rolling average
15	16-TAHH-092	Afterburner Temperature Greater Than or Equal to	≥ 2350° F
16	24-FIT-9430	Exhaust Gas Flow Rate (Unit Production Rate) Greater Than or Equal to	≥ 13,210 scfm, one-hour rolling average
17	24-TSHH-001	Quench Tower Exhaust Gas Temperature Greater Than	> 200° F
18	24-DIC-033	Quench Brine Specific Gravity Greater Than or Equal to	≥ 1.10 SGU, twelve-hour rolling average
19	24-AIT-007	Brine to Venturi Scrubber pH Less Than or Equal to	≤ 7.0 pH, one-hour rolling average[g]
20	24-PALL-011	Quench Brine Pressure Less Than or Equal to	≤ 75 psig
21	24-FIT-006	Brine to Venturi Scrubber Flow Less Than or Equal to	≤ 310 gpm, one-hour rolling average
22	24-PDIT-008	Venturi Exhaust Gas Pressure Drop Less Than or Equal to	≤ 30 in. w.c., one-hour rolling average
23	24-FIT-030	Clean Liquor to Scrubber Tower Less Than or Equal to	≤ 800 gpm, one-hour rolling average
24	24-PIT-036	Clean Liquor Pressure Less Than or Equal to	≤ 35 psig, one-hour rolling average
25	24-AAH-206	PAS Blower Exhaust O_2 Greater Than or Equal to	≥ 15% O_2
25.a	24-AAL-206	PAS Blower Exhaust O_2 Less Than or Equal to	≤ 3% O_2
26	16-AAH-175	PAS Blower Exhaust O_2 Greater Than or Equal to	≥ 15% O_2
26.a	16-AAL-175	PAS Blower Exhaust O_2 Less Than or Equal to	≤ 3% O_2
27	24-AIT-207	PAS Blower Exhaust CO Greater Than or Equal to	≥ 100 ppm, one-hour rolling average corrected to 7% O_2 dry volume[c]
28	16-AIT-059	PAS Blower Exhaust CO Greater Than or Equal to	≥ 100 ppm, one-hour rolling average corrected to 7% O_2 dry volume[c]
29	PAS 702H[d]	PAS Blower Exhaust Agent Detected Greater Than or Equal to	≥ 0.2 SEL
30	PAS 707H	Common Stack Exhaust Agent Detected Greater Than or Equal to	≥ 0.2 SEL[e,f]
31	23-BRA-TNKS	Brine Surge Tanks 101,102,201,202,Four Levels High-High (BRA-TNKS = 23-LSHH-02 and 23-LSHH-06 and 23-LSHH-702 and 23-LSHH-706)	18'3" Level

[a] Waste feed cutoffs (WFCOS) are activated and recorded by PDARS when the associated setpoint is equaled or exceeded.

[b] Rolling average means the averages of all one-minute average over the averaging period. A one-minute average means the average of detector responses calculated at least every 60 seconds from responses obtained at least every 15 seconds

[c] One-hour rolling average is composed of the 60 most recent one-minute averages. Each one-minute average is composed of the four most recent instantaneous CO process variables, which occur at 15-second intervals.

[d] One ACAMS is online for each agent at this location. A backup ACAMS is available for each agent if the primary ACAMS is taken offline.

[e] The alarm settings (in mg/m^3) for H/HD/HT=0.015.

[f] An Automatic WFCO occurs if the two online ACAMS are not staggered so that at least one unit is sampling the stack.

[g] In accordance with class 3 permit modification TOCDF-DFSQBpH-03-1014, brine pH will be reestablished during the comprehensive performance test (CPT).

Table D-2
DEACTIVATION FURNACE SYSTEM
MACT AUTOMATIC WASTE FEED CUTOFF

PROCESS DESCRIPTION	ANALOG INSTRUMENT TAG ID[a]	WASTE FEED CUT OFF ALARM TAG ID	WASTE FEED CUT OFF ACTIVATION BASIS	MACT LIMIT[b]
Minimum PCC Outlet Gas Temperature	**16-TIT-182/244**[c,d]	16-TALL-182	Hourly Rolling Avg	954°F
Minimum SCC Outlet Gas Temperature	**16-TIT-092/003**[c,d]	16-TALL-092	Hourly Rolling Avg	2,150°F
Maximum Kiln Pressure	16-PIC-204	16-PSHH-204	Greater Than (5-sec Delay)	-0.1 inWC
Chlorine and Chloride Feed Rate Greater Than or Equal To	Calculated Value	Calculated Value	12-hour Rolling Average	See AMR
Ash Feed Rate Greater Than or Equal To	Calculated Value	Calculated Value	12-Hour Rolling Average	See AMR
Low Volatile Metals (As, Be, Cr) Feed Rate Greater Than or Equal To	Calculated Value	Calculated Value	12-Hour Rolling Average	See AMR
Semi-Volatile (Cd, Pb) Feed rate Greater Than or Equal To	Calculated Value	Calculated Value	12-Hour Rolling Average	See AMR
Mercury Feed Rate Greater Than or Equal To	MTEC Calculation	MTEC Calculation	12-Hour Rolling Average	See AMR
Maximum Feedrate	AMR	Calculated Value	Burster/Fuzes per hour	274
Clean Liquor pH Less Than or Equal To	24-AIT-034 A-B[ce]	24-AALL-034	Hourly Rolling Avg	7.0 pH
Clean Liquor Density Greater Than or Equal To	24-DIC-035[c]	24-DAHH-035	12-hour Rolling Avg	1.05 SG
Packed Bed Differential Pressure Less Than or Equal To	24-PDIT-025[c]	24-PDAH-025	Hourly Rolling Avg	0.5 inWC
V Cone Flow Rate Greater Than or Equal To	24-FIT-9430 A-B[c]	24-FIT-9430 A-B	Hourly Rolling Avg	13.2 kscfm
V Cone Flow Rate Less Than or Equal To	24-FIT-9430 A-B[c]	24-FIT-9430 A-B	Hourly Rolling Avg	8.0 kscfm
Venturi Pressure Drop Less Than or Equal To	24-PDIT-008[c]	24-PDAHH-008	Hourly Rolling Avg	30 inWC
Brine to Venturi Scrubber Less Than or Equal To	24-FIT-006[c]	24-FAL-006	Hourly Rolling Avg	310 gpm
Clean Liquor to Scrubber Tower Less Than or Equal To	24-FIC-030[c]	24-FALL-030	Hourly Rolling Avg	800 gpm
Clean Liquor Delivery Pressure Less Than or Equal To	24-PIT-036[c]	24-PALL-036	Hourly Rolling Avg	35 psig
Quench Brine Density Greater Than or Equal To	24-DIC-033[c]	24-DAHH-033	12-Hour Rolling Avg	1.10 SG
Brine to Venturi Scrubber pH Less Than or Equal To	24-AIT-007 A-B[ce]	24-AALL-007	Hourly Rolling Avg	7.0 pH
Blower Exhaust Gas CO Concentration Greater Than or Equal To	16-AIT-059[cf]	16-AAH-059	Hourly Rolling Avg corrected to 7% O_2 dry volume	100 ppm
Blower Exhaust Gas CO Concentration Greater Than or Equal To	24-AIT-207[cf]	24-AAH-207	Hourly Rolling Avg corrected to 7% O_2 dry volume	100 ppm

a Calibration information (i.e., instrument ranges, accuracy, and methods and frequencies of calibration) is shown in Attachment 6 of TOCDF RCRA Permit.

b Recorded upon activation or change of state of switch.

c Continuously monitored with values being recorded electronically at approximately 30-second intervals.

d Control loop number corresponds to bolded Tag ID. Controller algorithms manipulate the output of both transmitters to determine the process variable as follows:

• The controller averages the output of both transmitters if the transmitter outputs differ by less than 32°F.

• The controller uses the transmitter with the highest output if the transmitter outputs differ by greater than 32°F and the associated waste feed interlock is activated when the temperature becomes greater than the set-point value.

• The controller uses the transmitter with the lowest output if the transmitter outputs differ by greater than 32°F and the associated waste feed interlock is activated when the temperature becomes less than the set-point value.

• The controller uses the transmitter with the lowest output if the transmitter outputs differ by greater than 32°F and the high transmitter's output is at full scale (i.e., 20 milliamps, or maximum instrument range).

e Only one analyzer is active at any one time. The active analyzer provides the process variable to the controller. Each analyzer is active an equal amount of time

f One-hour rolling average is composed of the 60 most recent one-minute averages. Each one-minute average is composed of the four most recent instantaneous CO process variables occurring at 15-second intervals.